THE

MARYLAND FARMER:

DEVOTED TO
AGRICULTURE, HORTICULTURE,

LIVE STOCK
and RURAL ECONOMY.

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Government Aid.

The following address was delivered by the editor of the *Maryland Farmer*, E. Whitman, at the meeting of the American Agricultural Association, held in New Orleans, February 20th, at the Exposition Building. Preambles and resolutions were unanimously adopted. Mr. W. is one of the Vice-Presidents of this organization:

In connection with the general subject of agriculture, I would introduce to your special attention a subject which is now occupying the minds of farmers in all parts of our country, and which I believe to be well worthy of *discussion* at this time. It is the subject of Government Aid in behalf of the farmers' interests, wherever it can be given appropriately.

That the general government are constitutionally empowered to bestow aid in this direction has been so often demonstrated, that it is unnecesary to dwell upon it now. It would indeed be a matter of regret to be obliged to mention precedents to support this view, when, under the exercise of a similar power by the general government, we are enabled to be here to-day and behold this grand Exposition.

It is a well established fact that the farmers form the largest and most important part of the citizens of our country. On this fact I base the claims which may be made for government aid. I would not oppose the aid extended to any other class of our countrymen; but as the farmers far outnumber all other classes, and as the prosperity of all other classes depends in a large measure upon the prosperity of the farmer, so it is but right and proper that a large share of legislative aid should be extended to the agricultural interests. It is notorious, however, that the farmers interests are the last to be considered and the first to be set aside.

The farmers bear the burdens of the government; because they form the great body of the people and are thus the consumers of a majority of manufactured articles, and are the purchasers of a great amount of the imports from foreign lands. They are at the foundation of commerce and general trade; and all duties, rents, taxes, intermediate charges and profits are paid by them, in so far as they must purchase and consume the greatest amount.

Merchants and manufacturers are comparatively very small classes in number; and yet a great part of the legislation of congress hinges upon what will benefit them. Steamship lines are subsidized, harbors are improved, and facilities for intercourse with foreign countries are provided by the general government in behalf of merchants, while the suggestions of Boards of Trade and Chambers of Commerce have a decided influence on congressional action. The aid extended to manufacturing interests is too large to be estimated by me here. Every item of tariff protection, the whole system

of patents, and many subsidiary items of legislation belong to this class.

I do not object to these things, even though I recall them to your memory now. Let all classes be aided, as they need aid, to make of our land a successful, self-sustaining and happy people! I do not object, therefore, to this aid extended to other classes. I only wish the same aid, in equal proportion, extended to the farmer. At present he bears the greatest part of all the taxes–indirectly perhaps–from which come the aids extended to other interests; and also the greatest part of all taxes necessary to support both the state and the general governments.

What do the farmers get in return? Very, very little. It is certainly reasonable that the farmers should look to the government for their portion of the aid it is so freely bestowing upon its citizens. I am well aware that when farmers ask for legislative aid, many obstacles are suggested,and the question is generally made the subject of what would seem much unnecessary investigation as to the propriety of bestowing it, or the possibility of lawfully granting aid in this direction.Representatives sent to congress by farmers' votes, seem to hesitate when called upon to vote on any appropriation which has as its object the farmer's benefit. The Laws introduced to aid manufactures,to subsidize steamships or railroads,or to benefit any class of speculators or monopolists, are touched with every appearance of reverence; while bills having in view the farmer's good, are apt to be looked upon with indifference.

In view of these facts farmers, whenever in convention assembled, should express with decision their determination to urge upon the general government such appropriations as shall benefit the agricultural interests; and should point out specific departments where laws would be of benefit and where aid would be practicable.

Persons who are content to continue in the ruts worn by their ancestors fifty years ago, may look upon these views with a careless eye. But farmers who are up to the age in which we live and who believe in the law of progress, will see what a vast room still remains for improvement in almost every department of their work, and will naturally look to the general government to do liberally in their behalf, even as it is doing in behalf of all other classes.

For example:—Hundreds of thousands of dollars have been lost to the farming community from the want of experimental stations. It is true that a bill was introduced into congress during the last session for a small appropriation to each state for this purpose. It is very proper to state here that this bill has received a very favorable report from the Agricultural Committee of Congress, and we may hope for its passage. They speak of the experiment stations already established as follows: "They have been found to be profitable, and their benefits are seen and felt by the farming communities more immediately interested, and would not be abandoned, though they cost much more than they do." The bill appropriates $15,000 to each State, and to each Territory where agricultural colleges are or may be established. Speaking of their practicability the report says; "They have met the wants of progressive farmers wherever they have been established." But it has not yet become a law. Should not every just and honorable influence be exerted by us in behalf of the passage of this bill?

Another example:—Many earnest and far seeing farmers are advocating the establishment of signal stations in all parts of our country and a bill for this purpose has been before congress. Is it too much to ask that the benefits accorded to our merchantile marine should also be extended to the farmer?

Again:–Liberal appropriations are made by the states and by the general govern-

ment for these great Expositions in which the manufacturing industries of the world bear the principal and most conspicuous position. We heartily rejoice in this fact! It is a noble work for the progress of humanity, and for the good of every land where such an Exposition is held. But need I say that strictly Agricultural Expositions are greatly needed all through our country, and that they should have the fostering care and the ample pecuniary aid of the general government.

I might suggest, also, how valuable an appropriation would be to this body now assembled here, to enable it to carry forward some of the great objects for the benefit of agricultural interests, which are constantly pressed upon them from all sections of the country; and where only the pecuniary means are wanting to secure large benefits to the farming community.

Desiring to call your especial attention to this subject, and to create, if possible, a healthy tone of public sentiment in this direction, I would respectfully offer the following preamble and resolutions:

Whereas.—The general government has the constitutional authority to aid the agricultural interests of the country as other classes of its citizens are aided; and *Whereas*, the prosperity of our entire people is commensurate with the progress and prosperity of the farmer.

Resolved.—That we urge upon Congress the prompt passage of such bills as shall benefit the agricultural interests; among which we name, the bill to establish an experimental station in each state of our union, and the bill to provide signal stations in the various States and Territories.

Resolved.—That we are in favor of appropriations by Congress for Agricultural Expositions, gotton up in centres of influence, on such extensive scale, as will prove of general usefulness to the Farming Community.

Farm Work for March.

This should be a busy month with the farmer. He may meet with adverse weather, but he should persevere and not house himself, for this is the first spring month and he should be on the alert if he desires to accomplish his farming designs for the year.

Tobacco.

At all suitable times continue the stripping, conditioning and preparing the crop for market, yet be not too hasty, for you will lose in price much if your article is received in market too early or before it has had time to properly condition. We have never felt sure that tobacco was free from a second sweat until it had at home undergone a summer heat. It is a peculiar plant and will have its two or three "sweats." After the thorough heat of summer in June or July it will be crumbly and then admit moisture, so as to be beat or twisted in any shape and be preserved for any time after the packing process. It has then been "conditioned," which if properly done, will retain that nice aroma and nutty flavor so much desired and without which it may "cost more than it amounts to," or, in a word, may prove a dear bargain to the buyer or the manufacturer. Honesty is the best policy; hence we say to the planters, send only good tobacco to market, or such as will be a lasting specimen of the contents of the cask. Be sure it will open in Europe as it was inspected in America. You will raise the value of the article thereby. That which passes inspection to-day the same inspector would condemn in Europe, for the whole has been changed in its character by the time and the voyage. Is it honest to try and impose upon our cousins over the water in this quasi-legitimate way. Will they not take and have they not? taken advantage of this deception by lowering the price of the article to allow for such deficiencies? Let our planters follow the old rule of "honesty is the best policy," and condition well their tobacco before they send it to market—make less in amount—make it better and then they can demand and will surely receive better prices for this article which has become a luxury and a necessity to so many of the people of all countries.

Oats.

If not yet sown, let it be done at once. See that the land for this crop is well prepared and manured or fertilized. The other day we saw for sale at Messrs Whitman, Sons & Co., of this city, a beautiful specimen of oats, said to weigh

fifty pounds to the bushel. This is an astonishing weight when we remember that the legal weight is 32 lbs. only, and a majority of oats grown do not exceed 24½ or 25 lbs. per bushel.

Clover and Other Grass Seeds.

Sow these seeds now if not done before. If sown now, harrow the seed in among the growing wheat and rye, and then roll directly. The ground should be dry. The harrowing will pull up some of the growing crop, but the working will be of great benefit and the roller will close the earth abont the roots of such plants as the frost or the harrow has upturned and exposed, and this process will insure a good stand of grass. There is now much talk of the Johnson grass or Guinea grass, but we are not among its worshipers at present; we await further developments. It is one of the many old things that are being brought out by speculators to create a craze of the hour. No farm can improve unless great attention is paid to rearing good crops of grass, particularly clover.

Land Plaster or Gypsum.

Sow this valuable, yet cheap, article over the whole arable land of the farm at the rate of one bushel per acre. We cannot call it a fertilizer, yet in many mysterious, but unmistakable ways it helps plants to grow, particularly broad-leaved plants, such as corn, cotton, tobacco, and clover, etc. To all leguminous and soil renovating plants it is a great help, by retaining moisture and the ammoniacal salts of manure, and we believe both *attracts* from the air nitrogen and *holds* it for the use of all plants congenial to it. We do not profess to be learned chemists, and can give no scientific reason for our belief, but our experience and practical results manifest to our senses, induces us to hold to our theory. Chemists differ in their views and we put no faith in fine theories, unless they are supported by practical tests. An ounce of practice is worth a pound of theory.

Tree Planting.

This is a favoaable month for planting out all sorts of trees. As our forests decay and are destroyed by man, it becomes us to replace the valuable trees by annual plantings. By a systematic course, it is wonderful how easily a farm can grow its own full supply of locust, walnut, cedar and chesnut for posts and timber for fencing, and its own oak and poplar timber. This can all be done with little labor and cost, occupying too a small space. An acre or so of some out-of the way spot for growth of timber, and fence corners for locust and chestnut, cedar, etc. The roadsides for nut-bearing trees, walnut, hickory, etc. In time and not a long time either, a farm large or small, can be made to afford its own fencing along the lines where wanted—its own timber for building, and at the same time, nuts for home consumption and for market, which latter will add much to the general receipts of the farms, although it may be classed among the small industries, which are too much neglected and are too often despised or ridiculed. A child will in a day save nuts enough where they are plentiful, to more than clothe itself for a year. Is this no saving? Is this not a great incentive to industry and honorable independence? If for no other reason than its moral effect we humbly suggest *tree planting* as an absolute necessity on every well managed farm.

Ploughing.

What we said last month in the MARYLAND FARMER about this subject we enjoin more strenuously now.

Stock.

Follow directions given last month about the care and feeding of all sorts of stock, and pay particular attention this month to all working beasts. This and next month are very trying times on beasts, as they are shedding their coats and nature is preparing them for the change from winter to summer. This may be called a weakening month for them, and hence they need extra care and feed. Look well to the breeding animals, who bring forth their young mostly in March. See that the cows about to calve are put in warm places to themselves, the same as to the ewes you expect to yean; put mares about to foal in roomy, box-stalls, where they can be undisturbed and be well fed nnd watered, with a good dry bed, not too heavy, as much litter might impede the early actions of the young, should it happen to be feeble at birth. Sows should be confined to a tight, sheltered and warm pen some days before they are expected to give birth, so as to accustom themselves to their quarters and arrange their beds to suit themselves. Leaves or cut straw are best for bedding for such sows. Over all such animals the master or herdsman should keep a vigilant watch about the time when these events are expected to occur.

Garden Work for March.

The horticulturist will eat no idle bread this month if he desires to keep up with his work and realize good prices for early vegetables and good fruits. No matter how stormy and boister-

ous March may be, there are always days when the weather and soil invite the out-door labor of the gardener, and he should always be ready to take advantage of such opportunities. Hot-beds are to be made and in them seeds of egg-plant, tomato, and pepper, etc., to be sown thinly in drills, four or five inches apart. Cold frames are to be attended to and more transferred to them at the proper time, such as are drawn from the hot-bed, to become seasoned and to become thickly rooted and bunchy for setting in open ground when the season allows. Out-door beds can be prepared and sown with lettuce, radish, celery and cabbage seeds. For radish let a rich bed be made with a southern exposure, and well coated with slacked ashes and a little plaster, (gypsum) and sowed with French Breakfast and Long Scarlet short-top radish seed. A light soil is best for radish. Be sure and have the soil in good order and rake in lightly the small seed; tramp with the feet all beds, and cover for a time with open brush. Try some of Henderson's New Rose Celery and "White Plume."

Potatoes—Plant as soon as possible an early variety of potatoes. Early Rose is a good sort Manure heavily and have the land well prepared, and plant three or four inches deep. It has been found that it is best to plant whole potatoes of medium size and good form.

Peas.—Plant some rows of the Tom Thumb and American Wonder pea; plant, say two to three inches deep, and it would be well to cover with straw, which is to be raked off when the peas break ground, and to be returned if the weather becomes cold after the peas are above ground.

Strawberries—Mulch well after a good cleaning and working of the vines between the rows.

Small Fruits.—Trim and thin these, work well, manure and then mulch. Grape vines may yet be pruned and dug about, and spread for three feet around each vine sifted coal ashes from two to three inches thick; it will keep down weeds and the earth moist and cool about the roots.

Beets.—Sow beets for early use Let the ground be spaded or ploughed deep and well enriched. The Egyptian beet and Early Blood Turnip are popular sorts. The Eclipse is a new variety much liked by those who have tried it. It is a little earlier than the Egyptian, which it much resembles in many characteristics.

Carrots, Parsnips and Salsify.—Can all be sown now if the soil permits, neither one require very rich soil, or rather, soil newly manured or lately made rich by either stable manure or fertilizer. They all require, however, a soil which has been deeply cultivated and well comminuted. Make the beds for roots, fine and deep, so that the roots can penetrate easily to a great depth, which will prevent making short, stubby roots, with many little side roots that spoil the general appearance and deteriorate from the valne of the main root.

Small Fruits.—Now is the time to set out currant, gooseberry, blackberry, raspberry bushes, and strawberry plants. See that every garden has an abundance of each sort of these delightful fruits. Give all good culture and rich soil.

Shallots, Rhubarb and Asparagus.—Set out a full supply of all these. The old beds should be forked over, manured, and Asparagus treated with a heavy dose of salt sown broadcast.

The Flower Garden.—Much can be done in the flower garden. If as we have before suggested, walks have not been prepared, or beds cut and shaped and well prepared, all this work can now be done. Roses can be planted or pruned and shaped, and other perennial shrubs can be served likewise. Manures suitable to plants and flowers can be applied to the grounds and hardy plants set out, with seeds sown of the hardier sorts. Get the best catalogues of the best seedsmen, study them and thus learn the nature and habits and wants of such plants or flowers as you may wish to cultivate during the season to come, and you will soon become practical botanists without the trouble of knowing all the jaw cracking nomenclature of Botany, as it is now known as a science by reason of those wondrous names.

Hardy bulbs such as Tulips, Hyacinths, Lilies, should have been planted last fall, but may be now done, however, with little hope of bloom this spring or summer.

General Reflections.—On the whole, there are few more elegible and refining pursuits than the vegetable and flower garden to engage the men and women of our country, and none that will in so short a time engross their thoughts, minds and souls. The garden from the days of Adam and Eve has been the object of care and love and will so continue to the end of time. A well kept garden of flowers, fruits and vegetables, shadow the love of domesticity of the household, whether of palace or cottage, while the reverse, is the opposite. A poor garden shows poor love; no flowers indicate want of refinement and want of love; no vegetables show a total disregard of all social ties. These are our sentiments however repugnant they may be to our readers.

Give an humble cottage a good vegetable garden with a fair exhibit of flowers—however hum-

ble—and the traveler will set it down as the home of peace, love, and contented happiness. We therefore say when you sow a beet seed, plant a rose—let the useful never want for the ornamental, let the delicate and odorous flowers grace the table which is spread with the substantials of life.

For the Maryland Farmer.

Care of Harness.

I have demonstrated to my own satisfaction that by proper care the period of wear of harness can be trebled, having kept a set in hard use for twenty years—three times as long as some of my neighbors can use a set. And the care required is not great, while the saving in repairs almost compensates for it.

In the care of harness the most important item is oiling, and this amounts to half a day of labor twice per year. The harness frequently becomes wet with rain or snow, and the sweat of the horses especially insinuates itself into the pores of the leather; and with this moisture is carried into the pores the dust in the air and the yet finer dust from the bodies of the animals: the result being to destroy the pliability of the leather and to cause it to crack or break away from the sewing when subjected to the movements incident to use; and the moisture in the pores producing the further effect of rotting the leather. Hence the importance of excluding moisture and dust from the pores of the leather; and no better way to do this can be devised than to fill the pores with oil, as it not only excludes objectionable matters, but increases of itself the pliability and durability of the leather.

There is, of course, a proper way to oil harness. Before the oil is applied all dirt must be removed from the leather. The best plan to pursue is to take the harness in pieces; that is, loosen all the buckles. Then where the dirt and sweat have collected, generally about buckles and laps, scrape it off with a dull knife, after which wash the leather clean on both sides, using a rag or sponge and luke-warm water. While the leather is yet damp apply the oil. Use pure neats-foot oil, with a little castor oil added to prevent the mice from gnawing the harness. It is not an easy matter to get pure neats foot oil, as it is often adulterated. The safe plan is to go to some reliable dealer for it, and do not grumble if he asks a good price. The oil should be warm enough to spread rapidly (about luke warm) when applied. Pour it in a dish and apply with a woolen rag or sponge. Give both sides of the leather a good coating, then hang the straps in some airy, warm place, but where the sun will not shine upon them, and let them so remain for twenty-four hours; at the end of which time wipe off all oil that may be upon the surface and buckle the straps together. This work should be done in the very early spring that the harness may be used some days before it is taken to the plough-field.

Next to oiling the most important point in the care of harness is to make repairs as soon as needed. A stitch in time saves nine; and that stitch can be more easily put in than any of the nine stitches. As soon as the splice in a strap begins to start, sew the ripped place. Or in place of stitches, use small copper rivets, which can be procured in almost any hardware store. I find that these rivets hold the straps together fully as well as sewing and it is the work of less than a minute to put one in place. Longer rivets are better than sewing to hold the parts of tugs together when they once begin to part. Every farmer should provide himself with an assortment of these rivets, thread, wax, needles and straight awl for sewing, and a thong of oiled leather or buckskin from which to cut strings for course sewing or to bind parts together. The cost of the entire outfit will not reach a dollar, and by using it promptly repairs can be reduced to the minimum and the wear of the harness be greatly increased.

Allowing the harness to hang in the stables when not in use is a wasteful practice, as the dampness and foul gases are very destructive of it. It is always better to hang it in the granery, or at least in some part of the barn away from the stalls and manure pile. Should you get caught in a shower with the team, do not remove the harness as soon as the horses are got in the stables, but allow the leather to dry on the animals; if removed and hung up while wet, the straps will dry and harden in a cramped -up position and the texture of the leather be strained when next the harness is used.

JOHN M. STAHL.

Wind-Breaks.

The absence in many parts of the older states where there are large clearings adjoining each other, of anything like wind-breaks to check the force of the winds and storms, is one of the mistakes of our time that is coming to be noticed, felt and deplored. In some sections this serious oversight has resulted in much discomfort and evil, and is destined to work much more, unless speedy steps are taken to rectify it.

Every year the bitter fruits of this mistake are being experienced, as heavy winds sweep over the country, prostrating crops, fruit trees, and buildings, and maiming and killing stock and people. And in winter, with nothing to check the biting blast, how the flocks and herds do quake and shiver, and mutely implore the farmer for larger rations to keep up the vital flame at a living heat.

At such times as these, a single belt of timber ten rods in width, left where it should be, would save hundreds of dollars to a single small district. There is no estimating, and hardly any possibility of conceiving, what has been lost to the country on account of the absence of timber breaks between the farms and those points of the compass where the hard storms and greatest cold come from.

This mistake must be corrected. Farms should be sheltered as much as possible from all exposed points, not from storms of wind in summer, but from cold blasts in winter. Every farm should have its wind-break. Broad belts of timber should be left between the farms. Let farmers take heed and spare the timber and begin in time to rectify any mistake they may have made in this respect. There is more in farming than plowing planting and reaping.

Book Farmers.

All intelligent, successful farmers are book farmers—just as all good lawyers and doctors are book lawyers and book doctors. It is monstrous nonsense to deride a farmer because he reads agricultural books and agricultural papers. He may be a lazy man, who prefers to sit down rather than to hold the plow, or to read rather than to think. But that is not the fault of the books or the papers. He might do something worse.

We hazard nothing in saying that the world never had better agricultural papers than to-day—and never were papers more needed. The farmer who can read and does not take an agricultural paper, makes a great mistake. No matter how much experience he may have had, or how much he knows, he will be glad to see what others are doing, and to hear what they have to say. He is not obliged to adopt their methods. Many silly things get into some of the papers. They raise a smile, but do no harm. The wise farmer will sift out the wheat from the chaff. He will find suggestions that are valuable. Nothing is easier than to forget. We know many things escape our memory, and a good paper recalls them to our mind.

We might make higher claims, but leave that to the intelligence and candor of the farmers. A good agricultural paper is worth ten times what it costs, and every intelligent farmer knows this.—J. H., in *American Agriculturist.*

Querist.

HOW TO CORN BEEF.—We noticed in the *Mirror and Farmer* an inquiry by L. A. R., "how to corn beef so that it will keep until July?" and we believe we can give him a mode that will fill the bill, or will keep it until September if desired. Our rule, which we have followed for years, is as follows: For every one hundred pounds of meat, take four quarts of fine salt, four pounds of brown sugar and four ounces of saltpeter; a little saleratus is sometimes added. Mix all intimately, and when ready for putting down the meat, put a thin layer upon the bottom of the barrel, then pack a layer of meat and sprinkle thorougly with the mixture; and so on until it is all packed. With the juices of the meat, it makes sufficient brine. The meat should be closely pressed

together by a good weight. In packing, we always pack the meat for drying in the same barrel, placing it on top and when it has remained four or five weeks, or sometimes more, take it out for drying. We never lost any beef by using the above method and by frequently stirring the brine formed, especially in warm weather, it is kept in good condition as long as the meat will last, and our dried beef, we believe, is as good as need be.

Columbia, Conn. WM. H. YEOMANS.

Deer Creek Farmers' Club.

DOES IT PAY HARFORD FARMERS TO RAISE FATTENING CATTLE.

An Interesting Discussion.

The regular monthly meeting of the Deer Creek Farmers' Club was held at the residence of Mr. N. W. S. Hays. The President, Mr. Thomas Lochary, was in the chair.

The question selected by Mr. Hays for discussion was as follows: "At the present prices of beef cattle will it pay Harford county farmers to raise them?"

Mr. Wm. F. Hays said he had selected this question because in buying, stock cattle are too high, and in selling, fat cattle are too low. He wanted to know how to overcome this difference. His belief was that it would pay to raise our cattle. As a general thing Harford county farmers buy a low grade of stock cattle and sell a low grade of beef cattle. Home raised cattle are generally fat and a few to top off those we buy will help to sell them. With proper feeding there is no trouble to make a three-year-old home-raised steer weigh 1,800 lbs. They should be kept growing from the day they are calved and they can be sold any time. The proper time is when they are 2½ years old. It necessitates keeping a few cows. It has been stated that the first year a calf costs $35, and it should weigh 1,000 lbs. and be worth 6 cents a pound, or $25 profit. The average Harford county farmer don't make $25 a head on his stock cattle. The calves should be allowed to run with their dams until four months old.

H. Spalding always raised a good many steers and thought it profitable. He had also found that it pays to raise heifers and sell them after their first or second calf.

R. John. Rogers remarked that one trouble connected with raising our own stock cattle is that it necessitates keeping so much stock on hand. For instance a farmer who grazes 20 head must have 20 cows, besides 20 yearlings, 20 two-year olds and 20 three-year-olds. With proper pains no doubt you can raise better stock than you can ordinarily buy, but you can buy good stock if you pay the price they cost. Low grade cattle, even when fat, are harder to sell than good cattle. To carry the number of head of stock to graze 20 home raised steers you must have a great deal of pasture and provender and have at least 60 head on hand all the time. Cows require the best of care at all times and the cost of keeping each of them would fatten a steer. It requires good pasture and plenty of grain during the winter to raise good calves, and to do it successfully thoroughbred stock is necessary.

Harry Wilson generally raises all the best calves, but did not think it would pay our farmers to keep a sufficient number cows to raise all their stock cattle. It is an up hill business to keep cows for calves alone. On a large farm it would pay to keep say 10 cows, raise the best calves and buy more stock cattle. We need not have thorough-bred cows to raise good cattle, but a thorough-bred bull and good average cows will produce cattle nearly as good as thorough-bred.

R. H. Archer said that a good, clear farm, well set in grass, ought to be occupied by young cattle, not calves; but if a man is rich and has two farms, one of which is not valuable, containing woods and waste places, calves might be raised on it profitably, In raising home bred stock the question is what to do with the old cows. They deteriorate after having a few calves. On a farm of 200 acres it would require a great many fields to raise enough stock for grazing purposes. It pays to raise two or three calves but to raise stock cattle will not pay.

John Moores thought it would pay the average farmer very well to raise his calves. One thing however, had been lost sight of, in considering the subject, which is, the butter the cow might produce; but in raising cattle you cannot calculate upon making much butter A 100 acre farm will run 10 cows. They would average 4 lbs.

of butter a week, or 40 lbs, in all—a considerable item in connection with the calves. Mr. Moores said he raises only two calves a year and finds that in 30 years he has sold $3,000 worth of cows. His grade Jerseys bring from $60 to $80, and are generally sold at 5 years old. They come in profit when 18 months old. If farmers would turn their attention to raising cows, calves and making butter they would make more money. It is not essential to have thorough-bred Short Horns or Jerseys, but have good grades. It would pay however, to have a thorough-bred Short-Horn or Jersey bull. It will pay to raise every calf dropped on the farm, and they may be taken from the cow when four days old. At 7 or 8 weeks old they will eat cob meal the same as fat cattle will. In raising calves and making butter employment is furnished for every member of the family, which is an important consideration.

S. B. Silver said he sometimes doubted whether or not it pays to buy cattle in the fall, feed them rough feed through the winter and graze them the following summer. His system is to raise calves and during the last few years he had found that it pays better than buying stock cattle. It brings in more ready money and the outlay is much smaller. You should have good grade cows and breed to thoroughbred bulls. A home raised steer 2½ years old will bring from $70 to $75, without extra care or crowding. He would not advocate growing a sufficient number to stock the farm. You can, however, stable 5 or 6 calves in the winter in one box stall and they will eat no more than one steer.

Judge James D. Watters said: I think an affirmative answer to this question requires that we should be able to use thorough-breds, or at least very high grades, of some one of the improved beef breeds. Probably such steers as we can buy at 2 and 3 years old for $40 or $50 are cheaper bought than raised. But if we can raise thorough-breds about as cheaply as we can scrubs, it don't by any means follow that it is cheaper to buy scrubs, or even good grades, than to raise our own thoroughbreds. Good Short Horn breeding stock can now be bought at very little over beef prices. By commencing with a small herd one may soon raise his own breeding stock. Eight years ago when Short Horns were much higher than they are now I bought two heifers and a bull—now I have ten cows which, distributing the original cost among the ten and deducting what I have received from the sale of the male increase, have cost me comparatively little more than so many native cows would cost. The better the breeding the better the feeder. We can buy all the scrub steers we want, or even very good grades, but we cannot buy thoroughbred steers. If thoroughbreds make better beef and more beef from the same amount of feed, and if we cannot buy thoroughbreds but can raise them nearly as cheaply as we could scrubs or grades, then it seems to me almost self-evident that we ought to raise our own stock. The extra number of cows which it would require our average farmer to keep is not a serious matter. For instance I have been in the habit of feeding about 30 head of steers and keeping 5 or 6 cows for the use of the farm. Now the natural increase from ten cows kept to three years old will make the amount of stock about the same, and I expect the ten cows to raise ten good calves and supply us with the milk and butter required. I believe $1,000 is considered a very reasonable profit for fattening 30 bought steers. Last spring I sold two thorough-bred steers, at 3 years old for nearly $250.

Thos. A. Hays regarded Judge Watters' remarks as very practical and agreed with them.

Wm. D. Lee was of the opinion that it pays to raise good calves but he would not make a business of keeping a lot of cows for the purpose. Good grade calves feed up and pay better than stock cattle. Small farmers should keep good grade Jersey cows and buy their stock cattle. To keep high-bred Short Horns you must feed high and take good care to have strong pasture.

Mr. Crowl believed it pays to raise calves.

Harry Coale would not keep cows to stock his place, but would keep all the cows necessary for family use, and raise their calves and buy stock cattle. A well-bred bull makes a great difference in stock.

N. W. S. Hays went in for good stock of all kinds, scrubs being dear at any price. He would not keep cows to stock his place, but would buy a few good steers to winter and graze in the spring.

Thomas Lochary, the President, said it appeared that with the improved breeds that the opportunities for raising cattle are

better now than they ever have been. Keeping cows makes a great deal of extra labor, and the per centage of death among cows and calves is greater than among steers. A man who can make money that way would make it by almost any kind of farming if he gave it the attention required to make it profitable. In raising calves you may count every other one a heifer. He preferred to buy his steers. He raises his milk cows. It is difficult to buy a good milk cow but not hard to get a good steer.

Mr. Thomas A. Hays asked whether it pays to bed cattle. Several members thought it did. Mr. Rogers said one advantage in bedding would be a saving of valuable manure.

Adjourned to meet at S. B. and Geo. E. Silver's, February 28th. Subject: "The comparative advantages of this and other regions of the United States for young men to settle in."

Renting by the Year.

No land owner, who puts out his lands to to annual renters, can reasonably expect for them to improve under the process. No tenant who expects to remain at a place but one year, will do much to improve it, but rather will try to get all he can at the least possible outlay. Hence it is that so many rented farms deteriorate rapidly from year to year. The frequent change of occupants works very adversely for the worth and advancement of a farm. It is ruinous both to the land-owner and the tenant. It is by this system that so many farms are every year becoming less fertile, and renters poorer instead of richer. Every time a tenant moves he looses something, and sometimes very much. He encounters bad weather, and is subject to great annoyance and inconvenience, gets furniture broken, and often endangers the health of members of his family by exposure, cold, wet, &c.

If owners of farms would put out their lands on long leases, say five or ten years, tenants would feel more at home, and would make more effort to raise manures and keep the fences and buildings in good condition. They would produce better crops, and the lands would improve rather than decline. Schools and society would be more stable, and in many ways both land-owners and tenants would be much benefitted. When a farmer gets a good tenant, it is to his interest to try to hold him, and if lands were let on longer time (under judicious contract) good tenants would not be so hard to find. It is possible to make contracts that would be mutually beneficial to both parties.

Yearly renting ought to be suppressed as an evil, which, if continued, threatens to destroy our agriculture root and branch. Put your lands out only on a long lease, and a system of recuperation.

Ensilage in England.

Ensilage seems to be permanently adopted in England and Scotland. At a recent silo exhibition there were nearly four hundred entries of products, and the British farmers claim that the system enables them to be totally independent of the wet weather which has regularly ruined the hay crop of England for many years. One Scotch farmer exhibited some hay which he cut partly under water and stored in a silo. It comes out a fresh green in January and his cattle eat it with a keen relish. If the silo will thus enable the British dairymen to tide over the natural defects of their climate, it is possible that in the future the British cattle industries, now languishing under foreign competition, may revive and again become profitable as in former years. One thing is certain, ensilage will be most thoroughly tested before the steady English abandon it.—*Orange County Farmer.*

—WITH the December number, the MARYLAND FARMER closes its 21st volume. It is "the oldest agricultural journal in Maryland and for 10 years the only one." In his editorial to the public, Mr. Whitman says: "From our first issue we have been able to continue the publication of the Maryland Farmer under the same title and control, never missing a month's issue; amid the varied changes of the world and the wonderful strides of progress we have kept up with the spirit of the times." The Farmer is one of the best journals of its class in the country and we hope its editor will live to see it flonrish another 21 years.— *Winthrop Budget.*

Kent County Agrl. Association.

Discusses the Question of How Much it Costs to Raise a Bushel of Corn.

The question, "What is the average cost of a bushel of corn, grown on a 200-acre farm, on a 40-acre field, taking 40 bushels to the acre as an average yield," was then announced for discussion.

J. W. Corey said that of course every farmer understood that a corn crop is liable to failure from drought and other contingencies, but every sensible farmer also understood what a fairly average corn crop is and could form some judgment as to what is a fairly average cost of production, taking an average crop in an average year. A good work-horse may be estimated at a value of $100.00. He estimated the interest on cost and the wear of horses at $16.00 per year. Six horses, about the proper number on a 200-acre farm, may be estimated to entail a cost of $96.00. He said nothing about the cost of keeping horses, as he considered this to be offset by the crop of fodder, and he thought even enough surplus fodder might be sold to pay for the grain which the horses consume. To cultivate a 200-acre farm would require 3 hands for ten months at $18.00 per month each, they to board themselves, a total cost of $540. The interest on cost and wear and tear of implements on a properly-equipped 200-acre farm, he would estimate at $100.00, and would charge about ⅓ this amount to the corn crop. The total cost of tilling a 200-acre farm, according to above estimate, would be $736. Setting one half of this to the corn crop, except in the matter of implements, where the corn crop should be charged with one-third, he found the cost of producing each bushel, if the farmer got 40 bushels to the acre on 40 acres, to be within a small fraction of 22 cents per bushel. If he should get as low as 30 bushels to the acre the cost on each bushel would be something over 30 cents per bushel. If the farmer were a land renter, the cost of his one-half would be respectively 44 or 60 cents per bushel, in accordance with wether he got 40 or 30 bushels to the acre. In calculating the cost of a corn crop, however, Mr. Corey conceded that wheat, peaches and other productions of the farm might so divide the general cost of conducting the farm as to make the cost of producing corn less than he had estimated.

J. M. J. Byron estimated the cost of a corn crop to a farmer who should live on his own farm and who should raise 40 bushels to the acre on a field of 40 acres as follows —

Interest on cost of horses $10. Wear of horses $16 66. Horse feed in hay $61, horse feed in grain $44, labor $180 and board of labor $112, interest on cost of implements $9 and wear of implements $25, taxes on land $14 replacing hoes spades &c., 3.16, total $475.32. Cost per bushel a little over 29½ cents. In the case of a renter, by crediting to the above estimate the cost of provender and taxes on land, the total amount of cost would be $475.32 less $134 or $341.32, which devided by 1600 bushels would give a cost of 21⅓ cents per bushel or a cost of 42⅔ cents per bushel after paying the lanlord's rent.

Mr. Corey said that the hard times are caused very largely by the extravagance of the farmer of the present day and not by the low price of grain. Fifty years ago, grain was lower than now, and the cost of everything the farmer had to buy was double what it is now, and yet farmers got along in those days. Mr. Corey drew a picture of the simple ways of fifty years ago, when a carriage was looked upon as a great piece of magnificence. He argued that if farmers would only return to the simple ways of their forefathers, they would soon have more money than they would know what to do with.

Mr. E. P. Janvier moved that it be expressed as the sense of the meeting, that farmers in Kent county cannot raise corn at less than 50 cts. per bushel and make money on it.

The motion was unanimously adopted.

The following question was proposed by Mr. J. W. Corey and adopted for discussion at the next meeting.—"Is it advisable for the farmers of this county to obtain foreign labor?"

On motion the club adjourned.

The number of seed in a pound of herdsgrass is 1,813,000, and there are 81,485,000 in a bushel. There are 6,272,640 square inches in an acre. Sowing a half bushel of seed to the acre, there would be about 6½ seeds to the square inch. The seeds in a pound of clover will number about 497,000 and it will take 12½ pounds to an acre, or about one seed to a square inch.

For the Maryland Frmer.

Need for Agricultural Schools.

There are some farmers who learn but little from experience, observation, or in reading the experiences and teachings of others.

The majority of the white farmers of the South who have spent their lives in raising cotton to the exclusion of other crops—working their lands year in and year out without returning anything to the soil–will never play much part in adding to the improvement of Southern agriculture. They have had the benefit of an extended personal experience in farming, and know what it is to be in a constant financial pressure owing to an unprofitable system of tilling the soil; and they have had line upon line and precept upon precept; but though they have eyes they see not, ears but they hear not, and hands, but they will not work intelligently. They seem to be unable to get out of the old ruts, but blindly follow the same old path as if it were the only one to pursue. They lack the enthusiasm and progressive spirit of the true and successful farmer. They work hard; but they lack system and thoroughness. They cling to the old fashioned implements of their fathers. They economise closely, but not always judiciously. They seem to live for the present and do not look to the future, so far as the improvement of their farms are concerned. These men cannot be taught, for they are joined to their idols and are determined never to be converted to any other system than their present one,

Let us preach to them no more, but direct attention to the rising generation of young men. The future hope and improvement of Southern agriculture will depend upon our boys and young men. Their minds must be moulded in the proper direction. They should be educated with a special view to farming as a profession. Thus we see the great importance of agricultural schools and colleges, fostered and supported by state appropriations. Let these schools in every case be seperated from any connection whatever with purely literary institutions. It is utterly impossible for them both to work together successfully under the same general management. Experience, in every instance we have heard of, has shown that the literary department always over-shadowed and crippled the agricuitural usefulness and success of the other.

The only really practically useful agricultural colleges in this country today, are those that alone without any connection whatever with a purely literary school or university.

EDWIN MONTGOMERY.

Miss.

Who is Responsible?

A liberal estimate would be required to cover the expense of cultivation of crops on account of the weeds alone. To say that one half the labor expended is due to these troublesome intruders would not express the loss, because many a farmer cultivates merely to kill weeds, with little appreciation of its effect upon the crops. From this point of view we might regard them as useful incentives to better tillage, but most men would be willing to dispense with this doubtful source of inspiration. Anything more than the particular crop to which a piece of land is devoted, is an injury and a nuisance, no matter how valuable it may be in other relations. In grass and pasture lands we are obliged to harbor all sorts of course and noxious weeds which not only depreciate the value of the crop by their presence but appropriate the space and food which would otherwise be given to better plants. An occasional farmer wages a war of extermination and has the satisfaction of clean fields though expensively obtained.

The whole question narrows down to a depreciated value of the crop, or an excessive degree of expense in protecting it; in either case the financial result is the same. Now what is to be done?

The few farmers who seek to exterminate weeds find their work is never finished. They are at the mercy of their shiftless neighbors who furnish them a fresh stock of seed every year. A nuisance that contaminates air or water is restricted, but a man may raise weed seeds and scatter them indiscriminately. The first step therefore, (and its difficulty is granted) is to teach farmers through their pocket-books, shame them through their pride or compel them by law, to keep clean fields.

The borders of highways and rail-roads are rank with useless vegetation from the begining to the end of summer. If legislation upon the weed question is needed any-

where, here is the field for its readiest application. If the law can establish the width, and condition of the highways, if it can regulate the affairs of rail-roads, it can also prevent the tolerance of an injurious nuisance within their limits. Every cultivator of the soil suffers from these sources and has a right to ask and expect legal protection. Such an end must inevitably follow a vigorous expression of popular sentiment.

W. E. STONE.

Extract From

Bureau of Statistics, Department of Agriculture,

January 5, 1885.

Report as follows :—CORN.—The average price of corn is 36½ cents, which is one cent lower than the average for 1879, where the supply in proportion to population was quite as large. It has been lower but twice in ten years, in 1877 and 1878, after two previous years of abundance. It is highest in Florida, 80 cents per bushel, and the lowest price is 18 cents in Nebraska; Kansas, 22; Iowa, 23; Missouri, 26; Illinois, 31; Minnesota, 33; Indiana and Wisconsin, 34; Michigan, 40; Ohio, 41; Kentucky, 43. It is 52 in Pennsylvania, 54 in New Jersey, and 60 in New York. The range of values in the South Atlantic States is from 43 in Delaware to 68 in South Carolina, and 80 in Florida, increasing in the order of movement, except that Georgia reports 70 cents. In the more western States, it is 45 in Tennessee, 54 in Arkansas, 61 in Alabama, 62 in Mississipi and Texas, and 67 in Louisiana.

A FARMERS' CONVENTION.—The executive committee of the Virginia Agricultural Society has called a convention of farmers and others identified with the industrial interests of the State, to be held in Richmond on the 15th of April. The leading objects of the convention are to effect thorough organization, looking to the advancement of our agricultural and industrial interests; to expand and give greater efficiency to the department of agriculture by making more liberal provision for its support and enlarging its field of operations; and to formulate public opinion, to the end that the agricultural and industrial interests of the State may be promoted.—*Sun.*

Ensilage Notes.

About January 1st. I opened my silo and found the ensilage as well preserved as I expected. The ensilage comprised cow pea vines, Sorghum, and a small quantity of corn. My dairy stock all eat it with a relish, and indeed seem to prefer it to any other feed. My cows have gained in 10 days, from time of beginning feeding it, 33⅓ per cent. in their butter yield, and the quality of the same is much improved, especially the color. I have only fed ensilage once per day, and then in very moderate quantity, owing to the fact that I have not a sufficiency to last until grass in the spring. I save by the one feeding of ensilage nearly half the hay and other feed, at same time realizing the above increase in production. Some of my cows were almost entirely dry, when I began feeding ensilage, but they have all increased their yield of milk since.

Nearly every cow I now have in the dairy is due to calve in February and March. I am satisfied no other food that I could have secured at this season of the year, would have enabled me to increase the milk yield of 4 or 5 of the cows to the degree that I have. The next week I turned out two of the cows, milking them only enough to keep their udders relieved; and still the 2nd. week test, shows the same figures of increase. By feeding the ensilage twice per day and in larger quantities per feed, I have no doubt but that I could double the present increase.

Southern dairymen will do well to adopt ensilage extensively for winter feeding. A reasonable amount of ensilage gives a better relish for the dryer foods. It promotes free digestion. I do not reccommend ensilage as a perfect food within itself, and the best results will be had when it is fed in conjunction with other food. Ensilage put in the silo uncut, is believed by many to be sweeter than that run through a cutter, but not so convenient to feed and there will be more waste.

Pea vines can be put in silo without cutting and fed out without any waste to amount to anything. Sorghum, however, will produce more feed per acre than anything we can plant in the South. Milo Maize is said to yield enormously, but I have doubts as to whether it possesses the feeding value of many less productive crops.

I have raised at the rate of 30 tons sorghum per acre on very rich land. Land only tolerably fertile produced for me only 7½ tons corn.

On rich land I think the cow pea can be made to produce from 12 to 15 tons green forage per acre, and at the same time improve the land though the vines be taken off for ensilage and the roots only remain.

The objection to sorghum is, that it is a gross feeder, and will rapidly exhaust the fertility of the land.

I filled my silo slowly, and hence there is very little acidity about the ensilage.

I have never yet heard of any one who has abandoned it as injurious or unprofitable food for cattle.

Calves from 6 weeks to 2 months old eat ensilage with a relish, and improve upon it very rapidly in conjunction with their accustomed skim milk twice per day.

EDWIN MONTGOMERY.

Johnson Grass—Sorghum Halepense.

There is little doubt that this is one of the most valuable of forage plants in the South, and many hope that it will thrive in higher latitudes. Editor Carman has found it hardy on his experimental farm in Bergen County, N. J., that is in the latitude of New York, and hopes it will survive the winter still further North. It is a perennial with root stocks which are good food for swine. It is leafy, succulent, nutritious, and in the South it can be cut twice and still mature seed. In one of our exchanges an Alabama lady offers to sell or exchange for other seeds packages of the roots of this Evergreen Millet (as it is also called) with the statement that it can be readily propagated in this way.

Before our hopes are raised too high it should be considered that plants may endure our Northern winters without being able to make a profitable summer growth. Professor Beal writes us that a patch of Johnson grass on the college grounds at Lansing, Mich., has for three years wintered and seeded. It starts very late, however, and the first frost kills the top, so that it does not promise anything for that climate. But, then, Central Michigan, a degree North of Chicago, is a cold country, with seasons barely long enough to ripen Northen Dent corn. Actual trial can alone demonstrate its value for hay or pasture among us, and experiments will be watched with interest. Another Northern farmer who has nursed this grass through two winters reports that his cows will eat it, but they manifest no special liking for it. It may be that its taste is not as sweet or its nutritive quality as high in the North as they are in a more congenial climate.—*Philadelphia Press.*

Clover and Johnson Grass.

J. H. Moore, in *Home and Farm* writes:

I sowed a lot of red clover in March and cut from it in July half a ton of hay per acre. I had fears that the long severe drouth would kill it, but a rain the last of September has set it growing all right, and in a short time will afford good grazing. Every farmer in the cotton States should have enough clover to make hay for all his stock and to manure his land. It should be sown in February, or if there is rain enough, it will be best to sow in September. For the life of me I can't see how a farmer can get along and make a living without a pasture for his stock and a meadow for hay. He certainly must have a hard time to keep his cows alive on shucks, and to have to pull fodder for his work stock.

I have heard and read a great deal about Johnson grass; some praise and some curse it. I have have had it on my farm for thirty years, and I have formed this opinion in regard to it—for all the cotton planters it is an unmitigated curse, but for the stock-raiser it is a blessing. The way to manage it is in this way. Mow it for the hay two years, then graze close for one year; after this it can be cultivated in corn two years before the grass becomes troublesome. Then it can be cut for hay and grazing, and the land will improve each year, and the farmer will not lose the use of his land, as he will get a hay crop two years, then grazing one year. This grass for hay, Bermuda and other grasses for grazing, gives the Southern farmer great advantages over his Northern brother in handling stock, and when they intelligently utilise these advantages then will the South start on a new road to fortune and wealth, and then, indeed, will there be a new South.

Preparing Bones on the Farm.

A correspondent writes that he can get bones gathered for him at one quarter of a cent per pound, and, as superphosphates are found one of the best applications to the grain crops of that region, he wants to know if he can prepare these bones for use on his land profitably.

At that price he can dissolve them in sulphuric acid, and thus have them in the best form for application to his crops, at a much less figure than he can buy such a fertilizer. Finely ground bone is most easily dissolved, but farmers can not pro cure mills to grind them. The cheapest and best way for a farmer to do is to saw off a hard wood log two feet through. Let the block be sixteen inches high. Now nail some narrow strips of board or pieces of barrel staves around, letting them rise three inches above the block. This will prevent the bones from falling off the block, and with a sledge hammer the bones may then be mashed. This mashing will render them so porous that sulphuric acid will saturate them and eat them up. To make convenient tubs for treating these bones with acid, take large linseed oil casks and saw acrost at the bung. This makes two broad tubs about 16 inches deep. Two tubs are enough for one carboy of acid at a time. Carboys generally contain about 10 gallons, or 160 to 180 lbs. of acid. Put 8 to 10 gallons of water into each tub; now pour one-half of a carboy of sulphuric acid into each tub, and stir the acid and water together with a wooden shovel, and immediately fill each tub with the crushed bones and cover closely. The combining of the acid and water generates much heat, and care must be used in handling the acid that it does not touch the skin, as its acridity will produec bad sores. The tubs should be stirred every six hours, and, when there is much fine bone, it should be removed and the acid drained back into the tub. Fifty pounds of acid will dissolve about 100 lbs. of bone. But this 100 lbs. of bone, when dried by admixture with fine, dry, sifted earth, coal ashes, or gypsum, will be worth more than any hundred pounds of commercial bone feriilizer you can buy in the market. The acid costs slightly less than two cents per pound.—*National Live Stock Journal.*

Things Worth Knowing.

A correspondent of the *Dakota Farmer*, after having tried "turf," coal, wood and sunflowers, has settled upon the last named as the cheapest and best fuel for treeless Dakota. He says: "I grow one acre of them every year, and have plenty of fuel for one stove the whole year round, and use some in another stove besides. I plant them in hills the same as corn (only three seeds to the hill,) and cultivate same as corn. I cut them when the leader or top flower is ripe, let them lay on the ground two or three days; in that time I cut off all the seed heads, which are put into an open shed with a floor in it, the same as a corn crib; the stalks are then hauled home and packed in a common shed with a good roof on. When cut in the right time the stalks, when dry, are as hard as oak, and make a good hot fire, while the seed heads, with the seeds in, make a better fire than the best hard coal. The seed being very rich in oil, it will burn better and longer, bushel for bushel, than hard coal. The sunflower is very hard on land. The piece of ground selected to plant on should be highly enriched with manures. In the great steppes (prairie) region in the interior of Russia and in Tartary, where the winters are more severe than here in Dakota, the sunflowers are, and have been for centuries past, the only kind of fuel used.

THERE is somthing wrong about a horse-stable when the air there perfumes ones' cloths in a few minutes. Plaster, muck, road-dust, or some other absorbent, should be freely used. The condition is still worse when the nose detects ammonia. There is not only a loss of manurial value then, but harm to the eyes of horses, and to harness, and to the varnish of buggies and carriages. Change the bedding often and use absorbents freely.—*Maine Farmer.*

Kalamazoo Celery.

EXTRACT FROM A CORRESPONDENT IN GARDENERS MONTHLY.

Midway between Detroit and Chicago lies the beautiful city of Kalamazoo, sometimes appropriately called Celeryville. Fifty tons of the esculent are expressed from Kalamazoo daily now during the height of the shipping season. Kalamazoo celery is famed from ocean to ocean and is the brand called for everywhere. Shipping begins about July, increasing till the holidays, and then gradually decreasing until the crop is disposed of in the spring. More growers are annually holding their crop until the firmer markets of spring. Three thousand tons were shipped from this point alone during 1883, and the shipment for 1884 is estimated at 5.000 tons. From 1,500 to 2,000 acres are devoted to the industry in this vicinity, and the production of a superior article has never exceeded the demand. Twenty thousand stalks are easily raised during the season on an acre, and the wholesale price ranges from fifteen to twenty-five cents per dozen.

Marsh land has become the home of this luxury and Hollanders are the main producers. Driving north from Kalamazoo through the country, one passes great 100 acre farms devoted to the sweet-scented celery, reminding one of that Methodist hymn:

"Sweet fields beyond * * *
Stand dressed in living green."

One would never forget a drive through the celery gardens in any direction from Kalamazoo.

How to Kill Canadian Thistles.

Dr. HARE in his lecture, said thistles could be killed by letting them remain till they were in bloom (always being careful not to let any of them go to seed) and then cut them down. The rain would fill up a little hollow that would be left in the centre of the stalk and the thistle plant in this way would be rotted by the rain water. This they would find would be an effectual way to destroy thistles.

Mr. MURTAIGHS said he had been able to get rid of thistles by cutting them down before they went to seed, and ploughing them under.

For the Maryland Farmer.

Hungarian Grass.

Like many another thing, Hungarian grass does not have that good reputation among farmers that it deserves to have. While a few may praise it; many will condemn it. Theoretically, and practically too, it has great value for feeding purposes. Dr. Sturtevant of the N. Y. S., Experiment Station, gives the following chemical analysis, showing the comparative theoretical value of Hungarian and Timothy.

	Timothy	Hungarian
Water	13.50	16 70
Ash	3.87	5·77
Albuminoids	6.16	7.63
Fibre	28 94	28.14
Nitrogen—free extract—	45.85	40.28
Fat	1.68	1.48
Or water free:		
Albuminoids	7.11	9.16
Fat	1 94	1.77

Mr. Sturtevant then adds: "In my own experience it (Hungarian) seems fully equal in feeding value, to the best of hay and sometimes I think it superior.

But of course much depends on the time of cutting, the curing etc., of this hay. It must be cut before seeds are ripened otherwise it will have harsh, woody stalks which cattle will refuse. Probably the best time is, just as the seed heads appear here and there, in the field. Thin seeding, too, will give it too rank and leafy growth, which renders it less attractive to stock and less nutritive also.

Hungarian grass is not a friend to cold weather. Wait until the weather becomes warm and settled, even to the latter part of June in this locality, before sowing. It attains growth and maturity for cutting in 40 days, if the weather is hot, but if a cold night comes on, this rapid growth is checked and seeds will begin to form, if the stalk has reached the height of 12 to 18 inches.

Another peculiarity it possesses is, that it will stand drouth well, and so great is its tendency that way (perhaps from the small evaporation from the leaves) it is slow to wilt and is thus hard to cure. It will require three or four days of rather close attention to get the crops ready for the barn. It has another peculiarity, that of feeding on the surface layers of the soil, thus differing from clover, for instance, which roots deeper. It is for this reason that it

is called an exhaustive crop. It removes fertility from a comparatively small depth of soil, and therefore, fertilizers applied to this crop will show their effects immediately. For the benefit of those who wish to sow this seed for the coming harvest, we submit Dr. Sturtevant's conclusions:

1. Sow when the weather is warm and has become settled.
2. Sow thickly, say five pecks to the acre.
3. Sow on well prepared soil, fertile and friable.
4. Cut as soon as seed heads can be seen generally over the field.
5. Feed in combination with other fodder.

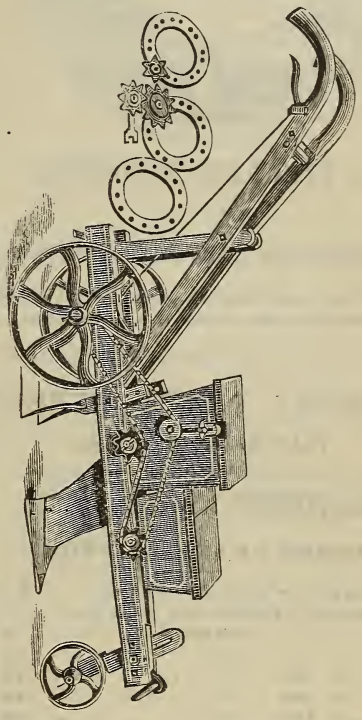
J. W. DARROW.

Feeding Values.

The London Times published the result of some recent experiments to determine the feeding value of different foods in comparison with hay, with results as follows: One hundred pounds of hay are equal to 275 pounds of green Indian corn, 400 pounds of green clover, 442 pounds of rye straw, 360 pounds of wheat straw, 164 pounds of oat straw, 180 pounds of barley straw, 153 pounds of pea straw, 200 pounds of buckwheat straw, 300 pounds of dried cornstalks, 175 pounds of raw potatoes, 504 pounds of turnips, 300 pounds of carrots, 54 pounds of rye, 46 pounds of wheat, 59 pounds of oats, 85 pounds of mixed peas and beans, 64 pounds of buckwheat, 57 pounds of Indian corn. 68 pounds of acorns, 105 pounds of wheat bran, 167 pounds of wheat, pea and oat chaff, 179 pounds of mixed rye and barley, 54 pounds of linseed or 339 pounds of mangel wurtzel. These results may so nearly approximate the real facts as to be of some value in practical feeding, but are not to be relied upon as strictly accurate. In the first place, the feeding value of hay, which is here taken as the standard, varies greatly according to the variety of grass from which it is made, the stage of ripeness at which it is cut, and the manner in which it is cured. With such variations in the standard, accuracy of results in the comparisons with other foods is out of the question. It is probable that an average article of hay was taken for the standard, if any one is able to determine just what an average sample is.

The Keystone Corn Planter and Fertilizer Distributor.

This machine will plant from ten to twelve acres of corn per day, dropping kernels in drills, or in hills, at any desired distance apart, and sowing at the same time if needed, any kind of pulverized fertilizer. It is strong, well finished and simple enough for the most ordinary laborer to use.



Each machine is furnished with four dropping rings and pinions to regulate the number of kernels and distance apart of planting. It will distribute any amount of fertilizer, from 150 to 400 pounds per acre, at the pleasure of the operator. Manufactured by Pennsylvania Agricultural Works, York, Pa.

SILOS AND ENSILAGE.—President of the State Agricultural Society in Maine, says in *Home and Farm*: "I have fed ensilage three years and know by repeated tests that my cows will give more milk and make more butter when fed on ensilage than when fed on good hay."

A STANDARD MAGAZINE,

DEVOTED TO

Agriculture Live Stock and Rural Economy,

Oldest Agricultural Journal in Maryland, and for ten years the only one.

EZRA WHITMAN, Editor and Proprietor.

141 WEST PRATT STREET,

BALTIMORE, MD.

BALTIMORE, MARCH 1st, 1885.

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One Young America Corn and Cob Mill, warranted first-class in every respect, price $40.00, will be given for 25 new subscribers to the MARYLAND FARMER one year.

NOTICE.

Although the name of Col. W. W. W. Bowie as Associate Editor has been withdrawn, we feel desirous that our subscribers should know that the long friendship which has existed between himself and the Editor is unimpaired. He will continue his communications for the FARMER but is released from much labor and responsibility.

To Subscribers.

We are confident that a trial of the MARYLAND FARMER will prove it to be of great value to all interested in farming, and that no progressive agriculturist can afford to do without it. We therefore invite our subscribers to send us the names of farmers in their neighborhood who do not take our Magazine. We will send to each a sample copy for examination. Additional subscriptions will enable us to add to its value and widen the circle of its influence. If our subscribers will send by postal cards, new names for sample copies it will be a great favor to us.

The American Agricultural Association

Meeting in New Orleans, February 20th and 21st, called together delegates from some twenty-five States and Territories. They were, mainly, able citizens of various callings not unknown to local fame, and appointed by the Governors of States.

The subjects discussed were brought out by papers read by the members. The first call was upon the editor of the Maryland Farmer, who read a paper on "Government Aid by Congress to the Agricultural Interests." The views presented were adopted heartily and with great unanimity; the preambles and resolutions without a dissenting voice. This paper appears in the present number of the MARYLAND FARMER. During the discussion which followed the reading by Mr. W., another resolution was introduced and passed asking Congress to lend further aid to the New Orleans Exposition.

Prof. Waterhouse, of Missouri, read at length on the "Economic needs of the South. It was able and caused spirited discussion and endorsement.

"The Perils to our Wheat Industry" was the subject of an address by Hon. Thos. H. Dudley, of New Jersey, for eleven years our consul to Liverpool. Russia and India were held, with cheap labor, to be our great competitors. The remedy was a home market, fortified with facts and figures, by one of the first statesmen of the land.

Mr. R. B. Baker, of New York, took a more cheerful view of the situation, advocating the moral elevation of our laboring classes.

Mr. F. D. Coburn, of Kansas, read a bright and able paper on the "American Desert," showing Kansas one of the most prosperous of all the States.

Mr. J. L. Wallace, of Dakota, in a spirited address set up his own Territory as even better than Kansas.

The President, Hon. J. B. Grinnell, of Iowa, left the chair to speak on the subject of the Cattle Ranges. Five hundred millions of acres, not suited to farming purposes, are now the scene of continual strife by the herdsman and of great loss to all concerned. He advocated leasing in limited tracts, for short periods; a system which would insure stability, revenue, and be to the best interest of all. His views were endorsed by a resolution. It is a new and great question and must ere long require a definite settlement.

Mr. John S. Irish, of New Jersey, read a paper on the agriculture of that State, giving many interesting facts.

Mr. Blakely, of Minnesota, and many others participated in the discussions.

The following resolution offered by Mr. Ezra Whitman, of Maryland, was unani-

mously adopted with many favorable comments by members from all sections of our country.

Resolved, That the Commissioner of Agriculture, Hon. Geo. B. Loring, has earned the thanks of the agriculturists of the nation, for his intelligent and efficient administration.

Committee on nominations made the following report:

President, Hon. J. B. Grinnell, Iowa; senior vice-president, Mr. N. Y. Sprague, Vermont, (retiring president); secretary, John M. Price, Kansas; assistant secretary, F. Walker, Dakota Territory; treasurer, Hon. Thomas H. Dudley, New Jersey.

Board of Directions—Hon. J. B. Grinnell, Iowa; Hon. Harvey Baker, New York: Gen. John S. Harris, Montana; Robt. Mitchell, Indiana; Prof. S. Waterhouse, Missouri; J. H. Read, New York; John W. Johnson, Virginia; F. C. Morehead, Louisiana; D. B. Gillham, Illinois; B. H. Pryor, Kentucky; E. W. Allen, Oregon; Col. J. W. Wolcott, Massachusetts; J. F. Wallace, Dakota Territory; Prof. J. J. Anderson, Texas; J. C. Stevens, Ohio; Hon. Thos. H. Dudley, New Jersey. One vice-president from each State and Territory.

Mr. Grinnell objected strongly to being nominated for the presidency of the association. He would not object to the nomination if the present president were in attendance, but he being absent, he protested.

The protest, however, availed nothing, for Mr. Grinnell was elected president with a cordial unanimity that testified more than anything else could have done to the popularity he has created for himself during the convention.

The remainder of the report was also carried, including the names of the Board of Directors and the lists of vice-presidents for the various States and Territories of the country.

Hon. J. B. Grinnell, the President, whose declinations the association would by no means accept, though he spoke with hearty compliments of Col. Sprague whom he preferred for that position, is himself a man of mark. He is the man whom Horace Greely told in words afterwards so famous "Young man go West." He founded the city of Grinnell, Iowa—now a place of 4,000 inhabitants—and has been for thirty years past in active service, as State Senator, member of Congress, farmer, railway manager, &c., &c. He is a writer, author of "The Cattle Industries of the United States," &c. He will put energy and soul in the new organization.

Mr. John M. Price, of Kansas, a gentleman of high repute, is Secretary, and Mr. F. Walker, of Dakota, full of energy, is assistant Secretary. It all means life, a kind of new birth to come with the new name to be adopted, viz: The United States Agricultural Society. No doubt a great future is before this national organization. It only remains for its members to properly exert themselves in behalf of objects of really national importance to secure benefits which shall prove of great value to our agricultural interests.

Editorial Letter No. 1.

NEW ORLEANS February 25, 1885

I left Baltimore on Monday the 16th for New Orleans, and it seems strange that a ride of 48 hours from B. to this place should show such a change. Two days before I left the mercury was below zero. Here the weather is mild and pleasant; the grass is green, and the click of the lawn mower is heard cutting the grass in the front yards and around the public buildings, orange trees loaded with ripe fruit and sending out upon the air their rich aroma are here; the magnolia and a great variety of trees and plants make the trip a delightful and interesting one to the Northern visitor. But I must give you some description of the Exposition. This is my seventh day here, and although I have been industrious

and worked diligently, I have hardly made a beginning towards a comprehensive view of this great Exposition. Two days were spent at the convention of the American Agricultural Association, the Bee Convention and a convention of Editors to organize a National Press Association, the ballance of time I was busily engaged in examining the grand Exposition. I had little idea of its magnitude until I began. It would take me five days more to finish my examination, therefore any one visiting the Exposition with a view of examining what there is to be seen, had better calculate on spending ten days or more, yet I found a great many spending only two or three days and indeed some only one day. This is a great mistake as the Exposition is undoubtedly the largest and most interesting one ever seen in the world. It differs somewhat from the Philadelphia Centennial, but in all its branches that interest me it is larger and far superior.—The foreign exhibits may not be as large as they were at the Centennial and perhaps the Fine Arts may not be as good, but in all the other branches far superior. Farmers can have some idea of the extent of this Exposition, when I tell them one building covers 33 acres, all under roof, with a gallery extending all the way around it. In this building I found the agricultural machinery which was of course very interesting to me and to any one connected with agriculture. There were hundreds of exhibitors in this class, and every kind of implement ever worked upon the farm was to be seen here. I have not time nor space to enumerate them, but will name a few, any one of which would have made in itself a grand show, viz.: The Whitman Ag'l Works of St Louis; Penna. Ag'l Works, York, Pa.; Pitts Agricultural works, New York; B. F. Avery & Sons, Lousville, Jas. Hall Plow Co., Maysville, Ky.; Blymer Manufacturing Co., Cincinnati, Ohio, &c. The machinery that worked by power was all in operation worked by 20 gigantic engines, furnishing 4,200 horse-power.

The Government of Mexico furnished $500,000 to make their exhibit and it does them great credit, as it is the largest of any one exhibit in the building, and one of the most interesting. There are a great many exhibitors in this building that have expended from $20,000 to $50,000 to make their exhibit. To give you some idea of the extent of some exhibits, there is one firm from Pennsylvania who exhibits 17 steam engines and a plenty of other exhibitors in same proportion.

The next building visited was what they call the Government Building. This building is 885 x 565 feet, and is filled by the United States and State exhibits. We of course first made for Maryland's exhibit, which was soon found and here we met our pleasant and agreeable commissioner Dr. Bishop and his good lady, where we rested and were pleasantly entertained. We then commenced to examine Maryland's exhibit which was found to compare favorably with other States. I am sorry I have not time to give some description of them. There are a great many old relics and curiosities in this exhibit, and I cannot refrain from refering to one in particular, and that is the model of a plow used by Morse in experimenting in laying the first telegraph wire ever laid in the world. The experiment was from Baltimore to Ellicott City; the wire was laid under ground and a model of the plow used on that occasion is on exhibition here. This plow and other tools used on this occasion were manufactured and sold by me. I had little idea then what would be the result of these experiments. In all, the Maryland exhibit is a highly creditable one. We next visited the Live Stock; the line after line of stalls had been well filled with cattle, horses, sheep, goats and swine. The committee on horses and cattle had reported and a portion of the stock had been removed; judging from what remained the

show must have been an excellent one. The committee on sheep and swine were examining while I was there; the Poultry had already been examined by the judges and part of it removed, but like the other stock departments, quite a lot of fine specimens remained,for sale,I suppose. From here we visited the Horticultural Hall, which is 600 x 194 feet, and contained fruit from nearly every State and Territory in the Union; also from France, England, Mexico and other foreign countries. Here we saw a great variety of ferns, palms, the coffee, cinnamon and clove trees, and a variety of plants, &c., from the Temperate and Tropical Zones.

We were present at the opening of the Art Gallery. This building is 100 x 300 feet and is a fire proof structure; it is well lighted by sky-lights and the pictures show to splendid advantage at a distance; but the crowd was so great on the day of opening that I could not examine very carefully. I should think the exhibit was an exceedingly fine one. We had frequent interviews with the officers and always found them kind and courteous, working diligently night and day to make the Exposition a success. It should not be looked upon as a private enterprise, but national, and we trust Congress will appropriate the present amount asked for by the Exposition, which will relieve them from their present embarrassments. They have been unfortunate from the beginning. They opened before they were ready, and the weather has been nusually disagreeable for this climate ever since the opening. From the present time the prospects are much more encouraging, as March, April and May will be a far better time to see the Exposition than December, January or February have been. In regard to the location of the buildings, many seem to think it is in a disagreeable spot, some seven or eight miles out of the city and that it is very troublesome and expensive to get to it. This is a mistake, from near the St. Charles Hotel there are several lines of cars to the Exposition, two of these lines carry passengers for 5 cents each way, the other one is run by steam half way and the balance by horse cars the price of which is 10 cents each way; then steam boats are constantly passing up and down making the Exposition easy of access after you arrive in New Orleans. W.

HORTICULTURAL.

For the Maryland Farmer.

Strawberry Culture.

Where comparative nearness to market and the proper kind of soil is had, the cultivation of the strawberry can be made to pay very good returns, far better than grain, though it would not be a good policy to plant out an equal number of acres. One of the first requisites for success in growing strawberries for market is experience, without which no person should attempt it on an extended scale; and if one or two acres produce a certain and comparatively large profit, for the larger plantation will never receive the same amount of care, labor and capital per acre as the smaller one.

Our large city markets are generally good ones during the early and late part of the season at least, but the very best market, until there is too much competition, is undoubtedly a large country town, for while the highest prices there may not be as high as in the City markets, the lowest prices are much higher than the larger city markets return during a glut. In other words, the average price is always better in the home market, when the home market is a large country town where some attention is paid to manufacturing.

An experience of ten or twelve years has convinced us of this, and those who are remote from large city markets but near large country towns can profitably plant out an acre or more of strawberries, as it brings in the cash and early money, at a time in the spring when the farmer has far more outlay than income.

SOIL AND PREPARATION.

Some varieties succeed best on a rather heavy and others on a rather light soil, though all will usually do well on a good loamy soil, provided it is free from weeds

or trash of any kind, has been thoroughly cultivated for one or two seasons, at least, before, and is in good condition as far as fertility is concerned. It is useless to attempt to make strawberry growing a success on poor soil, no matter what variety may be planted.

Having selected the spot, have the land plowed as early in the spring as the soil is in fit condition, but no sooner, and make the piece as fine as good harrowing will make it. When this is done strike off furrows, with a one horse plow, 3½ to 4 feet apart, running twice in the same furrow to deepen and clean it out. If the land is not well enriched, spread a couple of inches of fine and well rotted stable manure in the furrow just opened and then ridge up over the manure, going twice around the ridge with the plow to shape it up evenly and to get the soil fine Now, having first steeped the roots in thick mud, drop the plants about eighteen inches apart on the top of the ridge when the

PLANTING

commences. Let a quick and experienced man follow, who with his left hand knocks off the top of the ridge and makes a deep and straight hole,and then puts in the plant, firmly pressing the soil around the roots. This latter item, of firming or pressing the soil around the roots—is very important, and generally insures the growth of the plant. Only young, year old plants should be planted. These look bright and clean around the base, while old ones are stockier and have considerable old and darkened matter with them. A couple of weeks after planting, run a cultivator between the rows, and with a hoe carefully cut down the ridge between the plants, taking care not to injure them. This cultivation, with frequent hoeing, should be done about every two weeks during the season, to keep down all the weeds and grass and to keep the soil mellow, thus inducing a strong and vigorous growth the first season. About the latter part of July, when the runners are striking out, throw the runners from every two rows together, making beds of them. and cultivate only the intermediate and clear spaces. D. Z. EVANS JR.

For the Maryland Farmer.

House Plants in Winter.

No farmers family need be deprived of the cheering influence of plants during the season of winter, any more than in summer, and the farmer who would deprive his family of the enjoyment of flowers,—nature's smiles,—during summer, on the ground that there is no place for them, would, in these days, be hardly considered up to the true standard of civilization, or of aesthetic culture to say the least. There is something lacking in the organization of the individual who does not admire the beautiful, and if there is anything in nature more worthy of admiration than beautiful flowers, it is difficult to find and at least difficult to possess. But in these days flowers are within the reach of all—the high and the low, the rich and the poor alike.

Plants in winter and that are designed for next summer's setting are best started from cuttings from the flower garden. The varieties are so numerous that it is not necessary to enumerate in this article, as different individuals will select such as are most desirable to themselves.

Cuttings should be taken in early fall from some thrifty and growing branch and placed in wet sand that is kept moist and warm in which they will send out their roots preparatory to permanent setting for the winter.

Regarding pots or crocks, there need be no expense as there is nothing that serves a better purpose than the tins from which canned goods have been used. They take up but little room and can be easily handled and placed upon shelves where desired.

When the cuttings are sufficiently rooted they should be carefully potted in earth formed by a compound of leaf mold, thoroughly decomposed manure and sand in about equal parts. For a time after potting it is sometimes necessary to place over the plant a goblet or some glass dish to assist it in its efforts to get rooted in the new soil. When this is believed to be accomplished they may be exposed more to the air and remain out of doors until there is danger from frost. When that period occurs they should be removed to the house and given posession of some window looking towards the sun at midday. Shelves can be arranged at suitable distances apart

by means of brackets, on which the plants are placed, and if kept at a mild and uniform temperature they will grow finely provided they recieve due attention.

They must be watered and occasionally given a shower bath to cause the removal of dust which is injurious to their healthy growth. They require considerable attention in winter lest some sudden cold should cause their destruction which is often the case. A high temperature is not desirable, it is better that it be moderately low rather than too high. There is much cheer in seeing plants growing when the ground is covered with snow and the trees are bare, and this is increased in the approach of spring when they begin to put forth their blossoms.

Columbia, Conn. WM. H. YEOMANS.

THE DAIRY.

For the Maryland Farmer.

Some Thoughts About Future Dairying.

Because a dairy is milked south of the once famous Masons and Dixons line, is no reason why the butter, cheese and milk may not be profitably produced, or even in the advent of a tidal wave of "Bosh" butter (?) deluging the country,that really fine butter will not find a market. There are always a few "old fogies" who will want good, dairy produce, and we are not after all, just ready to exchange our old stand-by cows, for undeveloped gold mines in Arizona, simply because the times look a little unfavorable for dairy produce. The present out look, may in one sense, be a blessing in disguise, for it affords us a chance to institute a little inquiry as to the past cost of producing butter and milk; and see if we cannot in the future cheapen our methods and while accepting lower prices, still by some means, have a fair margin left.

At the start, I assume that "bosh" butter will have this effect: the stimulation of butter production in two directions ; the co-operative creamery when possible, and private dairying when the farmer is willing to introduce new methods, and make a strictly No. 1 butter, and supply this to private customers. There are a large class who will not eat "bosh" butter; and if they can be assured that farmer Jones will make them a strictly fine dairy butter; and be so methodical about it, that it shall be of uniform quality throughout the year, they will pay a good price for it, regardless of the quotations of market butter; and the farmer who falls into this system, and by a superior butter forces recognition, will not be ruined by the bogus article.

Another class, circumstanced so as to combine in the creamery plan, will escape; for by adopting the most modern ways of cream production; and butter making, they find in the cities a class of hotels and public houses and even general consumers who buy the best that the market affords, and if the butter is consigned to such houses as make a specialty of good butter, and never deal in the bogus article, this butter if placed in the market in attractive form will escape competition of fraudulent grease compounds, and find ready purchasers. This then leaves the actual competition of dairy butter with the counterfeit, with those dairymen who seem bound to make poor butter, and put upon the market an article called dairy butter, but judged by its actual value as compared with that offered by farmer Jones, has but little more claim to be considered butter than has oleomargerine, and in flavor, its inferior.

This last class of farmers could make far more to let the calves suck their dams twice per day until six months old, and then sell them. No cheapened cost of production would make such dairying profitable. No market now calls for poor butter, and to see "fair" dairy butter quoted at 12½ cts. per pound, and creamery at 32 cts., is a variation that even better cows, and cheaper feed will not overcome. It must have the yet more certain element of excellent quality to reccomend it. There is yet another element of profit gradually creeping in ; that of the dairymen raising more, and finer breed heifer calves, and instead of milking a cow until her horns wrinkle out to the end ; let the middle aged cows go to the cities, and the milk producers about the towns, and thus keep a younger and thriftier class of cows than we are wont to do, and realize handsomely in this way.

Another mistake dairy farmers make is raising grain on too large a scale. Confine the grain raising of a farm to corn and oats, the great milk producers ; and raise all this needed grain at leist cost, rather than to

buy some one elses' grain, and pay him for the job, and the railways two prices for bringing it to the farm. Raise more fodder, such as clover, millet, fodder corn and the like, and depend less on hay. Build a cheap silo, and fill it with fodder corn. Don't say "Sour Krout" but fill the silo slow and no faster than it heats up to 140° and have ensilage as sweet as the day it was put in the pit. Do not buy another cow if you have got enough to start a dairy with; but get a good sire, and keep him until he is a dozen years old, if possible; and breed a line of good milkers.

With cheapened food, more of it; better stock, and more attention paid to breeding it, better methods, not only of making but marketing farm dairy produce, and a strict reading of the MARYLAND FARMER, will bring success in dairying, even with low prices.

Ohio, Feb. 12. JOHN GOULD.

We Must Have a Standard to Insure Success.

IN our February number we quoted from the *Massachusetts Ploughman's* special phonographic report of a meeting of farmers held in Boston. Subject being on "Grasses." And this month we copy from that excellent Journal a part of their report of the meeting held January 24th. "Discussion on Milch Cows and Dairy Farming" during which Mr. Eldridge Cushman said:

And here as in all other business we must have a standard which must not be an impossibility, yet high enough to insure success. It is not practical to keep in mind extreme cases; we should not harp upon the Oakes Cow or the Belle of Scituate, or even the Queen of Barnet, a cow that gave over 17 quarts of milk per day for every day in the year, or Smiths & Powell's Holstein cow Aaggie, that averaged 30 quarts for 10 months. I once saw a man who actually lifted a thousand pounds, but we should not expect to hire men upon our farms of any such strength and capabilities. The question is, what is the possible average under the most favorable conditions? I have spoken of good care and ample feed. I have allowed $75 for the value of the cow, quite double the average value. And most certainly gentlemen we shall have a right to expect results far above the average of the Commonwealth. I claim that a cow in the prime of her life, in her best flow of the year, after having fully recovered from the effects of parturition, should yield two cans or 17 quarts per day, and she should so hold out in her flow that she will average 10 quarts per day for 300 days of the year, or 3000 quarts per annum.

I know this is not quite up to the record of some herds that might be cited, but we shall do well who reach and maintain this standard. I find that practical dairy men differ widely in their estimate of the average annnal yield of a good cow. I am sometimes led to believe that methods of feeding have quite as much influence in the formation of their criterions as the capacity of the cows. Yet it must be admitted that but a portion of the cows in our State could be brought to this standard. The imperative demand is for better cows. Such cows as do come to the standard and possess other requisites, such as good teats, docile disposition, etc., must be crossed with pure blooded sires of the Durham, Holstein or Jersey breeds. And my experience has been that of three heifers raised under the most favorable conditions of parentage, one at least would go to the shambles after the first calf, and usually another after the second, but there is no loss in raising them if we do not keep them too long after we learn they are more valuable for the shambles than the dairy.

But to return; we have shown by estimation that 3,000 quarts of milk in production costs $66.50, and if this milk is converted into butter and the skimmed milk fed to swine upon the farm, there would be but slight loss of plant food, and the above would be a fair statement of the cost of the milk, and the fertility of the farm could be maintained by cultivation without the purchase of any fertilizers from off the farm. But on the other hand, if the milk is sold and carried off the farm, we are selling our farms by the quart, and this item in the production presents itself and must not be overlooked, and the value of plant food that has gone with the milk should properly be added to its cost. Now if we should sell 3,000 quarts per cow from 50 cows during the year, we should sell 150 tons of milk, and even if we are scrupulously and conscientiously honest,

87½ to 90 per cent. has been water, which of course we do not take into the account; but the plant food that has been taken from the soil has been according to the best authorities, or I may say all the authorities that I have consulted, I learn to be of nitrogen about 1850 pounds, or 37⅓ pounds to the cow; of phosphoric acid nearly 600 pounds or about 11 pounds to the cow; of potash about 525 pounds or a little over 10 pounds to the cow.

Taking these ingredients at their usual cash value, viz., nitrogen, 20 cents per pound; phosphoric acid 10 cents and potash at 4 cents per pound, thus we have a total of about $450 for 50 cows, or about $9 per single cow. The larger part of this as will be seen at once comes from the nitrogen, and I am well aware it is yet a debatable question upon which the doctors are not fully agreed just how and in what proportions this nitrogen comes from the soil; but we will not deceive ourselves, but give the producer all the benefits of the doubt, and add the $9 to the $66.50, making the total expense of the 3,000 quarts of milk $75.50, or just a fraction over 2½ per quart at the barn. A fair and legitimate business profit, such as is realized on most classes of manufactured goods, will admit of its being sold at the stable on an average for the year at 3 cents per quart, or 25 cents for an 8½ quart can *and nothing less.* And at this price the whole production must be taken every day, *and uone returned.*

WHY ONE COW WILL GIVE RICHER MILK THAN ANOTHER.

Mr. HADWEN.—The doctor has suggested something to the Chair, and I should like to say a word. The question naturally will arise why when the cows in a herd are under the same conditions, one will give richer milk than another. It is a question which we farmers do not fully understand. But when you come to look into the matter, a cow to give rich milk must have fat in her system. The cow that is absolutely reduced as to fatty matter cannot have good, pure, rich milk. There are cows whose fatty parts lie on the outside next to the skin and which have little fat in their internal organism. Those cows, as a rule, even on the good conditions, will not give first class milk. The question naturally comes why Jersey cows will give better milk than others. A cow in my barn gave richer milk than the others and the butter from her milk contained a larger amount of fat. The cream was richer, heavier and fatter. Finally, I had a Jersey cow which I had to take to slaughter. I got her reasonably fat and she was slaughtered. She was the first Jersey cow of which I had seen the internal organism. The butcher said the cow had not much fat on her, but when he came to open her he came to a different conclusion. The fat preponderated on the internal organism. There was an undue proportion of fat on the inside, and it was as yellow as that corn on the table. I got from her a new point as to how cows can give such rich milk. Reduce a Jersey cow to a skeleton and her milk is not richer than that from any other cow. This breed has a larger proportion of fat in their internal organism than any other animal and that is the reason why Jerseys and Guernseys and any others like them give richer milk. I believe there is a great difference in the fat in the butter and cream and milk that comes from such animals.

How Much Milk For a Pound of Butter.

At the late meeting of the New York State Dairymen's Association, held at Oswego, Dec. 16, a call was made for information as to the quantity of milk required for a pound of butter. A creamery manager from Bradford, Pa., responded to this call with the following figures: A mixed herd of 21 cows in the eight months from April to November inclusive, 1882, averaged a pound of butter to 23 pounds of milk and averaged 202 pounds of butter per cow. Fourteen grade Short-Horns in the same time averaged a pound of butter to 20½ pounds of milk, and averaged 241 pounds of butter per cow. Fourteen Holsteins in the same time averaged a pound of butter from 24½ pounds of milk, and averaged 235 pounds of butter per cow, and eleven grade Jerseys in the same time averaged a pound of butter from 16 pounds of milk, and in 10 months averaged 289 pounds per cow. The record for the 8 months having been lost, he could not give it in comparison with the other herds for the same length of time. The gentleman said he had been in charge of the creamery since 1882, and had endeavored to impress

upon its patrons the importance of improving their stock, with what results the following statement will show: In 1882, with an average of 750 cows, it required 23 pounds of milk for a pound of butter; in 1883 with 1,100 cows, 21 pounds of milk made a pound of butter, and in the season of 1884, 20½ pounds of milk made a pound of butter and he expected to still further lessen the quantity required.

How to Make Good Butter.

The best butter makers in the United States certify to the superiority of the De Laval Cream Separator in the most positive terms. Mr. A D. Evarts, a well known farmer and dairyman of Vergennes, Vt., writes of the machine:

"VERGENNES, Vt, April 7, 1884.

"*Dear Sir:*—You may mark down the De Laval Separator a success. We are now separating the milk of sixty cows in about fifty minutes, taking out every particle of cream as fast as milked from the cow, feeding the warm milk to the calves and pigs, who take it with a relish. We find an increase in the yield of butter sufficient to warrant the expense of Separator and power to any dairy of twenty-five cows. The butter is very much superior; the milk is worth more to feed; a complete separation is assured, be the weather either hot or cold; the work is reduced to a minimum. Every farmer needs the Separator, and the cost is less than most devices for setting milk where a suitable building or room has to be provided.

"Respectfully, A. D EVARTS"

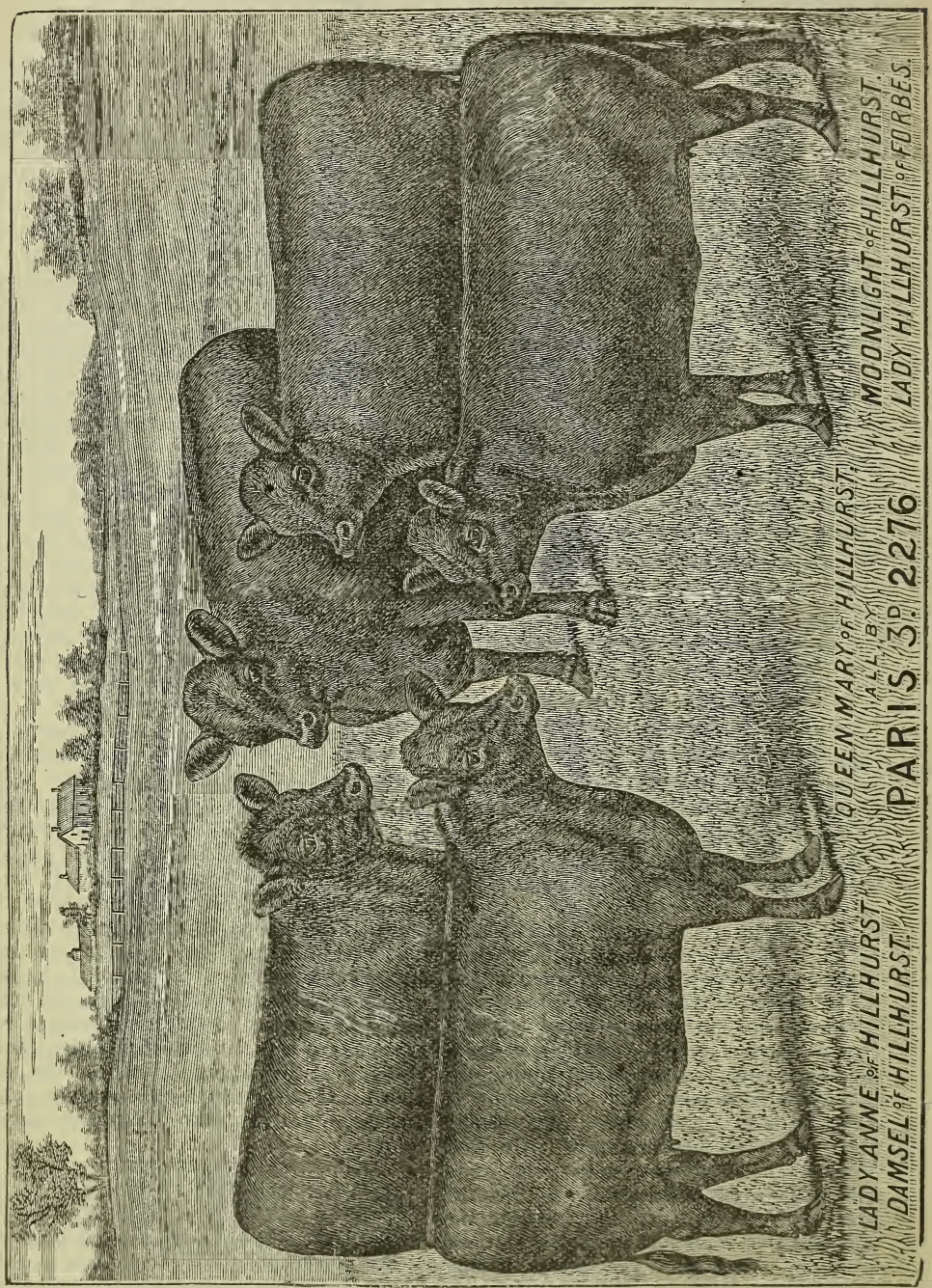
Messrs. J. & J. Darlington, of Darling, Delaware county, Penn., who have three of the De Laval Separators in daily operation, are getting eleven per cent. more cream from their milk than by the old process, which, on the quantity of butter they make and at the prices they obtain for it, more than pays for a Separator every three weeks. Address JOS. H REALL, President, 32 Park Row, New York, for catalogue.

COL. WEBSTER ON THE EXPOSITION.—Col. E. H. Webster and wife reached Baltimore on Tuesday night, after a visit to the world's Exposition and other points in the South. He says the exhibits of the United States not only excel those at Philadelphia in 1876, but far surpass anything he had expected to see. The weak point of the exposition, he considered, was the displays from foreign countries. He said Maryland's exhibit was really very good and quite artistically arranged, but the great states of the Northwest, aided by the railroads that traversed them, had stopped at no expense to show the variety of their productions. Yet after looking them over Maryland still made a satisfactory appearance.—*Baltimore Co. Union.*

Live Stock Register.

Every Man his own Veterinarian.

There are many situations in which the farmer finds himself, where it would be greatly to his benefit if he could act at once, and wisely. As the owner of stock, especially, is his sagacity and self possession liable to be severely tested, in the various emergencies which may arise among his own herds, and those of his neighbors. How is he to acquire this necessary information, and prepare himself to meet these unexpected occurrences? Perhaps he may have had the opportunity of witnessing the actions of others in similar circumstances, and if he is a man of observation, he has stored away the information thus acquired, and will bring it out whenever the occasion presents itself. Possibly his own dearly bought experience may have prepared him for prompt decision in these matters. If he is a man of fair education, he has profited by the perusal of the many excellent papers on veterinary subjects, which are offered in our best Agricultural Journals. Of course it is to the Press that the great body of farmers must look for this desired information, but how happy would it be for them if they could enjoy the advantages of instruction in Agricultural Zoology. It is lamentable, that more stress is not laid upon the necessity of diffusing this knowledge by our Agricultural Colleges, not only among their own students, but also the farmers in their vicinity. To the young men, who intend to become large stock-raisers, or to have extensive dairies, and even to those who are already established, a course of lectures upon the anatomy and functions of the digestive, generative, and lacteal organs, of the structure of the limbs, eyes, etc., and especially of the horse's foot, would be most admirable and acceptable, especially if with this knowledge was combined practical illustration of how to act under various circumstances and in emergencies,—Dr. SLADE in *American Agriculturist.*


QUEEN MARY 9 OF HILLHURST
A.H.B. 2276
MOONLIGHT 9 OF HILLHURST
PARIS 3.P.
LADY HILLHURST 9 OF FORBES
LADY ANNE 9 OF HILLHURST
DAMSEL 9 OF HILLHURST

We are indebted to Hon. M. H. Cochran, of Compton, Canada, for the fine engraving of group of Aberdeen Angus Heifers sired by his famous bull, Paris 3rd, who was first-prize bull at the Royal Northern Show in 1881. Lady Anne of Hillhurst, was calved August 15, 1883, dam, Lady Ann of Tilly four 3868; Queen Mary of Hillhurst, calved June 21, 1883; dam Queen Mary of Altyre 4th 4761; Damsel of Hillhurst, calved January 10, 1883, dam Daisy of Skene 5th 5659; Moonlight of Hillhurst, calved December 3rd. 1882, dam Mina 5th. 3844; Lady Hillhurst of Forbes, calved April 28, 1883, dam Young Lady Forbes 2nd 2555. Mr. C. informs us that the heifers comprising this group were not as might perhaps be supposed the pick of a larger number, but were five of the only six heifers in the herd by Paris 3rd that were over nine months old at the time, and the sixth heifer would have been in the group had she not been checked in growth for want of milk, her dam, an old cow suffering from indigestion and bloating, of which she died in the fall of 1883. The polls are becoming more popular year by year, and we prophesy a bright future for them.

Who Should take up Breeding Live Stock as a Business.

From what we have frequently expressed in these columns regarding the business of stock breeding, it may readily inferred that we hold a love of the business to be essential to a man's success therein. We are now speaking, it will of course be understood, of the men who personally superintend their own stock business and who raise stock on their farms, not of men whose cattle roam over millions of acres of grazing lands, or whose interest in cattle consists merely in an investment, however large, who have taken up cattle as they might take up any other fancy. The man who undertakes to invest his money in the live-stock business, for the purpose of making a living, and accumulating something for his old age, is bound to succeed, in this country at any rate, provided he has in addition to a knowledge of breeding and feeding, a personal affection for the animals themselves; but without the last qualification he is equally sure to be a failnre. The success that attends this sort of interested care of stock is exemplified, to a great extent, by the various breeds of live stock themselves. As a rule, horses excite a great deal of affection in their owners, and, hence usually thrive well, are docile and intelligent; next to them, cattle, both beef and dairy, show the good results arising from the gentle care and kind treatment that they receive from many of their owners. In this respect the Jersey is a most notable example. For many generations she has been the spoiled favorite of fancy breeders and dairymen. As a result, we have a breed of cattle which responds more readily to favorable influences than almost any other. On the other hand, the hog which is the most neglected of the domestic animals, shows a large percentage of deaths and profitless shipments. Again, as between individual animals, observe the thrifty condition and profitable returns shown by the Swiss cattle, the Normandy cows, and others, where constant attention, thoughtful care, and genuine affection for the animals exist. The Arab and his horse form perhaps the most notable example of the point we are seeking to impress upon our readers. Therefore we would say to the young man who thinks he would like to be a stock farmer, that unless he is really fond of stock—fond enough to see that his animals are well cared for before he looks after himself, or to sit up at night with a sick animal—he had better not take up the live stock business as his life work. —*Nat. Live Stock Journal.*

Do Manures Waste if Spread on the Surface?

There is a popular impression that manure spread upon the surface of the ground in the fall or winter wastes much of its value from evaporation, and especially from washing by the winter and spring rains. A Vermont farmer writes his experience to one of our Eastern exchanges in substance as follows: He drew out and spread manure during the fall and early winter upon a sloping piece of sod ground intended for corn in the spring, leaving, however, a strip on the lower side unmanured, expecting

that the washing from the manure on the higher portion of the field would make this part as rich as that to which the manure was directly applied. But on growing his corn crop he was surprised to find that while that on the manured portion showed the full effect of the manure, on the other portion the expected effect from the washing down was entirely lacking, and he was forced to the conclusion that the fertilizing properties of his manure remained in the soil on which it was placed. Manures so spread on the land may part with something of their bulk and much of their weight by evaporation, but it is only the water they thus lose. The fertilizing properties remain, and by the action of the atmosphere, sun, frost and rain, they are fitted to be taken up by plants as food, which they are not in their green state. The farmer need have no fear of losing any valuable part of his manure by spreading it upon his land, and can use his teams to no better purpose during the slack times in winter than in hauling and spreading such manure as is available, even if taken fresh from the stables.—*Farmers' Review.*

The Maryland Improved Live-Stock Breeders' Association.

The Maryland Improved Live-Stock Breeders' Association, Alexander M. Fulford, president, and T. A. Seth, Secretary, held its annual meeting at the Carrollton Hotel February 11. The old board of officers was re-elected: Directors, A. M. Fulford, E. B. Emory, J. F. McMullin, W. H. Whitridge, T. A. Seth, John G. Clarke, John E. Phillips. Charles K. Harrison and E. G. Merryman. Dr. W. K. Brooks made an address upon the subject, "What Has Science Done for the Improvement of Our Domesticated Animals." He spoke of Darwin's elucidation of the law of selection, and the great impetus thereby given to improvements of animal types by select breeding.

It was our purpose to publish the excellent address of Prof. Brooks in this number of our magazine; but it was crowded out. It will keep; and we shall probably be able to give the salient points of the address in our next number.

Holsteins for Beef.

It will be gratifying to the friends of the Holstein breed of cattle to read the following statement, which proves what has been often stated, that the Holsteins are superior beef animals.

A few days since we caused to be slaughtered the recorded Holstein bull Syracuse (822), calved April 24, 1882, the recorded cow Signet (1817), calved April 6, 1880, and Little Wonder (1788), calved May 14, 1880, with the following result.

Syracuse weighed alive, on day of killing	2290	lbs.
Dressed beef	1430	,,
Hide	142	,,
Rough tallow,	120	,,
Per cent. of dressed beef,	62 44–100	
Per cent. of offal	26	

He was killed by Messrs. Kalfelz & Lenhart, Syracuse, N. Y.

Signet weighed alive,	1470	lbs.
Dressed beef,	915	lbs.
Hide,	76	,,
Rough tallow	126	,,
Per cent. of dressed beef,	62 31–100	
Per cent. of offal,	24	

Little Wonder weighed alive,	1493	lbs.
Dressed beef,	791	lbs.
Hide,	78	,,
Rough tallow,	124	,,
Per cent. of dressed beef,	52 98–100	
Per cent. of offal	33	

These cows were killed by Chas. Walters, Stiles Station, N. Y.

Syracuse and Little Wonder had not been fattened for beef and Signet we had fed for some time but she was not what beef men would regard fat.

Taking everything into consideration we think this shows decidedly to the advantage of Holsteins as beef animals.

Yours truly,
SMITHS & POWELL.

THE POULTRY-HOUSE.

Scaley Leg.

Writers who ought to know, say that scaley leg in poultry is caused by a minute parasite, or insect, that burrows into the skin of the legs, causing swelling and sores.

They are doubtless right, but we have never seen the said insect, have never looked for it in fact, though our fowls have been affected more or less with this disease from the commencement of our house keeping days. We have never found that it injured the fowls in any way. They seem to lay as well and fatten as readily with as without it. If it is hurtful to fowls we have not found it out.

The scaley leg is objectionable however, on account of the unnatural and clumsy look that it causes a fowl to have; and for this alone, if for nothing else, should be gotten rid of, if possible. Even when the entire leg is covered with this disease, it can be made to slough off, leaving the leg with a healthy, smooth skin.

In our experiments to remove this affection, we have tried many remedies; sulphur and lard, gunpowder and soft soap, kerosene and lard, and tar and grease, and perhaps others. Some of these appeared to do no good whatever, and others were partially helpful only. Simple kerosene is effective, perhaps because of its penetrating nature, getting into every crevice. But it is too transient, and does not remain long enough to effect the purpose. A mixture of tar, kerosene, and lard is a certain cure, but not very speedy or very cleanly. The fowls get the tar on their feathers, nests, eggs, and whatever they sit upon while the tar mixture remains upon the legs, which is generally about a month at least. For this reason, if this remedy is used, it should be applied only at the moulting season, when the fowls are not laying, and are putting on a new coat of feathers.

This remedy is the most effective that we have found, it remains on long enough to do the work, causing the old and diseased skin to slough off, leaving a nice, new surface. One application, if the whole leg is well covered, will do; but two may sometimes be necessary. We know of no clean remedy that will remove the scaly leg, unless indeed kerosene will do it. Perhaps if often repeated, it would.

Clean roosts and houses will help to check this disease, or any other. Cleanliness and comfort is the secret of success in poultry raising. A flock diseased should be weeded out and removed to new quarters.

Chapters on Chickens.

BY EXPERIENCE.

CHAPTER III.

PREPARATIONS—HOUSES & YARDS.

1. Experience has taught me not to build large chicken houses.

2. Houses to accommodate a dozen birds have proved of greatest advantage to me

3. I have found that an open shed, connected with the chicken house, was a great convenience to myself and a benefit to my flock.

4. My house is 6 x 5, and my shed is also 6 x 5:—the whole 5 feet wide by 12 feet long.

5. One roof covers both house and shed.

6. House and shed face the South. They are eight feet high on the south side and six feet high on the north side.

7. A glazed sash in the south side of the house, commencing at the sill, gives light and warmth, and keeps the floor dry.

8. This window has a shutter for the cold months, and for protection at night.

9. The door opens into the shed, and is provided with solid hinges and a lock. It shuts close, for warmth.

10. The roof is shingled over tarred paper and the sides are lined with tarred paper.

11. The largest lumber is 3 x 4 studding, used for the sills; for the post for the hinges of the door, and for one front post of the shed—the west one.

12. The boards run up and down, and are battened.

13. The floor of the house is of earth, and is raised six or eight inches above the soil outside.

14. The perches are three inches wide on top and two inches thick. They are moveable so that they can be taken out for cleaning. I have two perches in the house eighteen inches apart. They are nearest the northern wall of the house. They are eighteen inches above the floor. They are on the same level.

15. Beneath the perches is a dropping board, two feet wide, arranged to slide into the shed for cleaning handily. It is placed fifteen inches below the perches, and rests on the sills.

16. At the ends of the perches, on each side are nest boxes for eggs. Two behind the door, west end; three on the east end; also, two boxes one above the other on the east side of the window, and two on the west side of the window on the front of the house.

17. The nest boxes on the ends are one foot above the perches. Beside the window they are on the sill, and one foot above the sill.

18. The size of the nest boxes are one foot square inside, with sharp pitched roof from the wall forward. The opening is edged below with a small strip of galvinized sheet iron.

19. The openings of some of these nests may be turned towards the wall. They are all movable.

20. Everything moveable inside of the house is fitted to the shed also, where they will serve in the summer.

21. Hinged to the front post, west end of the shed, is a light door of half inch boards, for keeping out snow from the shed in winter. It is lifted from the hinges and removed when not needed. It is light and easily handled in the summer. For the protection of the chickens roosting in the shed, is a wire door closed at night arranged to the same hinges.

22. The wire door may be replaced with one of tarred twine net; or, it may be dispensed with altogether, if the locality is free from depredators.

23. Ventilation is provided for the house by wired holes in the highest portion of the ends, east and west; the west under the shed.

24. To every such house and shed as this, (which costs comparatively little,) is a yard for the flock—twelve feet by twenty feet, properly fenced.

25. The fences are built six feet high as follows:—Two feet of solid boarding at the bottom; then common four foot lath above, placed three inches apart. The posts are three by four studding.

26. This fence is high enough for all heavily built chickens. If I wish a yard of "flyers," tarred twine net may cover the run.

27. In this yard I like to have bushes and shrubs for shade in the summer.

28. In the summer I arrange some nest boxes out in the yard, under the bushes next to the fence, partly concealed and with the entrance darkened. These have proved attractive for layers.

29. The entrance door is at the back of the shed, with solid fastenings; or at the foot of the yard, with merely a home-made button to close it. This latter arrangement has answered my purpose best.

30. I have been thus particular in my description because such a house and yard for each small flock have been the most satisfactory to myself. Cost very little, easily built, most profitable for all kinds of chickens, easily tended and kept in order.

Editors' Congress.

The meeting of the Editors' Congress was called to order by President B. B. Herbert, and immediately the names of new members were handed in, making the role of names nearly 100.

The committe appointed on nomination of officers for the ensuing year recommended the adoption of the following report: For president, Mr. B. B. Herbert, of Red Wing, Minn.; first vice-president, Mr. C. H. Jones, of Florida; corresponding and recording secretary, Col. John G. Elliott, of Dallas, Tex.; treasurer, Mr. Ezra Whitman, of Baltimore, Md., *Adopted.*

Under the constitution, vice presidents were then elected from each of the States and Territories represented in the meeting. The states not represented in the congress will have their vice presidents appointed by the executive committee.

NOTICE.—A large quantity of valuable matter is left out this month for want of space. It will appear next month.